

FAILEYEV, N. I.

3(7)

p. 2

PHASE I BOOK EXPLOITATION

SOV/1720

Leningrad. Glavnaya geofizicheskaya observatoriya.

Voprosy razrabotki meteorologicheskikh priborov (Problems in the Development of Meteorological Instruments) Leningrad, Gidrometeoizdat, 1958. 49 p. (Series: Its: Trudy, vyp. 83) 1350 copies printed.

Additional Sponsoring Agency: Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

Ed. (Title page): M.S. Sternzat, Candidate of Physical-Mathematical Sciences; Ed. (Inside book): M.M. Yasnogorodskaya; Tech. Ed.: A.N. Sergeyev.

PURPOSE: This issue is intended for scientific personnel engaged in the construction and use of meteorological instruments.

COVERAGE: In general, this booklet covers descriptions of new instruments and problems encountered in their development. It also describes methods used for selecting the optimum interval for averaging the velocity of the wind and for determining the aggregate composition of fogs. The instruments described in detail include a new
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Problems in the Development (Cont.)

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automatic condensation hygrometer, a simple device for determining the composition of fog, a field radiometer, a device for measuring temperature, apparatus for actinometric observations and a device for measuring winds of high velocity. No personalities are mentioned. Bibliographies follow each article.

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Problems in the Development (Cont.)

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Aleksandrov, V.S. Temperature Measurement Device

40

Svarchevskiy, V.N. An Instrument for Registering the Velocity
and Gusts of High Winds

43

AVAILABLE: Library of Congress

MM/sfm
5-25-59

Card 3/3

FATEYEV, N.P.

Development of electrical and radiation methods for measuring the
temperature of the surface of the soil. Trudy GGO no.86:49-56
' 58. (MIRA 11:11)

(Soil temperature--Measurement)

ZAYTSEV, Vasilii Aleksandrovich; LEMOKHOVICH, Aleksey Aleksandrovich;
PATSYEV, M.P., otv.red.; PROTOPOPOV, V.S., red.; VOLKOV, M.V.,
tekhn.red.

[Instruments and the study of clouds from an airplane] Priory
i metodika issledovaniia oblakov s samoleta. Leningrad, Gidro-
meteor.isd-vo, 1960. 175 p. (MIRA 13:7)
(Aeronautics in meteorology) (Meteorological instruments)
(Clouds)

32902

S/194/61/000/011/015/070
D256/D302

3,5800 (1395)

AUTHOR: Fateyev, N.P.

TITLE: Station dew-point hygrometer

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,
no. 11, 1961, 31-32, abstract 11 A256 (Tr. Gl. geo-
fiz. observ., 1960, no. 103, 45-56)

TEXT: A description is given of a new hygrometer for mass
measurements of air humidity in hydrometeorological stations. A
brief review is given of the latest developments of hygrometric
techniques in field conditions and in particular at temperatures
below the freezing point. For this purpose the highest precision
is obtained using the dew-point method, and this principle was em-
ployed in the described instrument. A characteristic feature of
the instrument is the electrical method of fixing the dew-point with
a simultaneous phase determination of the condensate (supercooled
water or ice). Incorrect determination of the phase leads to large

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Station dew-point hygrometer

errors of measurements, e.g. at -40°C and relative humidity 100% the error is $\sim 30\%$. The phase condition was determined by taking advantage of the difference in resistivity between foils of ice and water. A high-temperature resistant enamel named "metal'vin" in the form of foils was found to be the most suitable as the dielectric for measuring the resistivity. Two lengths of 0.5 mm diameter copper wire covered with a layer of enamel 10 to 15 microns thick were used as the measuring contact electrodes, the inter-electrode resistance being 10^5 to 10^6 ohm for the liquid state and 10^7 to 10^8 ohm for ice. The metallic mirror of the hygrometer was cooled by means of a thermoelectric refrigerator using semiconductor thermocouples supplied with current (~ 6 to 8 amp) from a battery. The temperature of the mirror was measured using a copper wire resistance thermometer with a non-balanced bridge circuit. For the phase determination of the condensate a circuit was devised using an electronic tetrode tube 191N (1E1P) with the measuring electrodes placed on the surface of the mirror connected to the grids and the output arm of the bridge including the indicating microammeter to

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the anode chain of the tube. The measurements of humidity were performed by switching on the refrigerator current and noticing the temperature on the scale of the microammeter at the moment when the pointer changed the direction of the deflection. Subsequently, the refrigerator was switched off and the phase was determined from the observed deflection: a deflection of 2 to 3 divisions corresponding to ice, and 10 and more divisions to water. The hygrometer is suitable for measuring the dew-point temperature in the range from +40 to -60°C with an error not exceeding $\pm 0.5^\circ\text{C}$. The time constant of the hygrometer is ~ 100 sec; the weight (excluding electrical supplies) is 3 kg. An error analysis is given, and the conditions minimizing the errors are specified. The results of laboratory and field tests are presented together with the obtained error distribution; errors of 50% of the measured results are within 1.5 to 2% and only errors of 10 to 12% of the results exceed 7%. The control measurements were performed against readings of a standard psychrometer. 10 figures. 25 references. [Abstracter's note: Complete translation]

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9.6110 (3002, 2605, 1063)
3.5140 (2305, 2405)

S/531/60/000/103/002/002

AUTHOR: Fateyev, N.P.

TITLE: Measurement of the Vertical Component of Wind Velocity by Ultrasonic Methods

SERIAL: Glavnaya geofizicheskaya observatoriya. Trudy, no. 103, 1960.
Voprosy razrabotki meteorologicheskikh priborov, 85-89


TEXT: Measurement of the vertical component of wind velocity is very important in the study of turbulent characteristics of the atmosphere, but existing methods of measuring it with hot-wire anemometers are unsatisfactory. This is because the observations are difficult to make, resulting data are difficult to process, and the apparatus itself is insufficiently accurate. A new method based on the determination of the additional velocity of propagation of an ultrasonic wave caused by vertical motion of the air, is proposed for measuring the vertical component of wind velocity. It is demonstrated that by measurement of change in velocity of ultrasonic wave propagation at a given moment it is possible to derive the desired value for W -- the true value of the vertical component of the velocity of movement of an air current. A general method for measuring ultrasonics is briefly mentioned. However, this method

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Measurement of the Vertical Component of Wind Velocity... S/531/60/000/103/002/002

cannot eliminate errors, often of considerable magnitude, caused by variation of temperature, humidity, and pressure. Therefore, two other methods, based on application of a two-directional ultrasonic beam, which can lessen or even eliminate the errors, are described. Fig. 2 and 3 show the diagrams of instrument arrangement used in these methods. Fig. 4 shows how the ultrasonic converters should be set at some distance from the remaining instruments in order to eliminate distortions. Experiments were required to find satisfactory miniature converters. Fig. 5 shows two types of converters. The first (Fig. 5a) is fabricated in the form of a cylinder of barium titanate. A plate attached to the butt of this converter serves as a source of ultrasonic vibrations; their frequency is dependent on the length of the cylinder. Exceedingly small condenser microphones (Fig. 5b) may also be used. The ultrasonic method is unquestionably superior to other methods and it is possible to construct a low-inertia, virtually distortion-free, highly adaptable instrument to employ the ultrasonic principle. The instrument scale can readily be made linear and graduated directly into units of velocity. There are 5 figures and 2 Soviet references.



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FATEYEV, N.P.

Measuring the surface temperature of soil by the radiation-zero
method. Trudy GGO no.108:59-63 '60. (MIRA 13:11)
(Soil temperature) (Radiometer)

FATEYEV, N.P.; ALEKSANDROV, V.S.

Use of piezoelectric converters in measuring meteorological
elements. Trudy GGO no. 112:3-13 '63. (MIRA 17:5)

AUTHOR: Fateyev, P., Department Head : 27-58-7-9/27

TITLE: To Improve the Methods of Laboratory Work (Sovershenstvovat' metodiku laboratornykh rabot)

PERIODICAL: Professional'no-tekhnicheskoye obrazovaniye, 1958,¹⁵ ANr 7, pp 17-19 (USSR)

ABSTRACT: Instruction methods and equipment have considerably improved in the past 4 years in the Schools of Mechanization of Agriculture of the Altay Kray. New buildings have been constructed, containing class rooms and workshops. Diesel tractors, combines and soil-cultivating machines of the latest construction are at the disposal of the students. Most of the training personnel for theoretical instruction and practical work in laboratories are graduates of higher schools. There still exist a few deficiencies in some of these schools caused by inadequate practical instruction. Practical laboratory work is poorly organized so that students do not know how to handle simple instruments or how to detect defects in machinery. For that reason, it is suggested that more attention should be paid to assembly work, machine maintenance and repair. Experiments conducted along these lines in a few schools have already led to satisfactory results.

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To Improve the Methods of Laboratory Work

27-58-7-9/27

ASSOCIATION: Uchilishcha mekhanizatsii sel'skogo Khozyaystva Altayskogo krayevogo upravleniya trudovykh rezervov (Schools for the Mechanization of Agriculture of the Altay Kray Labor Reserve Administration)

1. Agriculture--USSR
2. Personnel--Study and teaching

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22 (1)

SOV/27-59-2-10/30

AUTHORS:

Ryabov, N., Chief, Fateyev, P., Chief

TITLE:

How to Improve and Reduce Costs in Training Agricultural Machine-Operators (Kak uluchshit' i udeshevit' podgotovku mekhanizatorov sel'skogo khozyaystva)
A Self-Supporting School of Mechanization (Samookupayemost' v uchilishche mekhanizatsii)

PERIODICAL:

Professional'no-tekhnicheskoye obrazovaniye, 1959, Nr 2, pp 16 - 18 (USSR)

ABSTRACT:

The authors examine the possibilities of improving practical training in the schools of agricultural mechanization and of placing them on a partially self-supporting basis. This can be accomplished by considerably expanding the training and production program, especially the size of the training farms, and by establishing non-state-financed repair shops for the surrounding kolkhozes. Every school of mechanization trains 450-500 boys and girls. If their work is properly organized, it is possible to do not only all the agricultural work of a large training farm and to repair the school's equipment but also repair machinery of neighboring kolkhozes.

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How to Improve and Reduce Costs in Training Agricultural Machine-Operators
A Self-Supporting School of Mechanization

Existing training farms of only 200 to 300 ha, but with large numbers of students cannot be profitably productive. The size suggested is 3,000-4,000 ha with the prospects for expansion. The Klyuchi Rayispolkom has assigned 4,311 ha to a school for a training farm. The experience already gained by the school and its future plans are described in the article. Dealing with problems of education, the authors points out that, in the near future, schools of agricultural mechanization will be reorganized into agricultural vocational-technical schools. They consider it expedient to have mixed schools with both a 1 and 2 year training period. The students graduating from 8-year schools at 17 cannot work independently on complicated machines. They must go through a lengthy probationary period in secondary positions. The authors deal extensively with ways for the schools to achieve financial independence, and point out that the Pospelikha School of Mechanization gained a profit of 375,000 rubles in 1957. Calculations have shown that a training farm, repair shops, and the economic exploitation of school machinery can yield a yearly income of over

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SOV/27-59-2-10/30

How to Improve and Reduce Costs in Training Agricultural Machine-Operators
A Self-Supporting School of Mechanization

3 million rubles, if the students' work is properly organized. The teaching staff of the Chistyun'skoye uchilische mekhanizatsii (Chistyun'ka Mechanization School) has taken over the complete technical equipment from the former Zarechnaya RTS for the repair of 300 tractors per year, and is performing repair work to gain a partially self-supporting basis.

ASSOCIATION: Altayskoye krayevoye upravleniye trudovykh rezervov (Altay Kray Administration of Labor Reserves) and Otdel uchilishch mekhanizatsii (Section for Mechanization/Institutes).

for Falegov

Nachal'n.A

Card 3/3

RYABOV, N.; FATEYEV, P.

Branches of mechanization schools. Prof.-tekh. obr. 18 no.2:7-8
F '61. (MIRA 14:3)

1. Nachal'nik Altayskogo krayevogo upravleniya professional'no-
tekhnicheskogo obrazovaniya (for Ryabov).
2. Nachal'nik otдела uchilishch mekhanizatsii sel'skogo
khoz'yaystva Altayskogo krayevogo upravleniya professional'no-
tekhnicheskogo obrazovaniya (for Fateyev).
(Altai Territory—Farm mechanization—Study and teaching)

RYABOV, N.; FATEYEV, P.

Scientific achievements and the practice of progressive workers
are the basis for the training of machine operators. Prof.-tekh.
obr. 19 no.4:3-4 Ap '62. (MIRA 15:4)

1. Nachal'nik Altayskogo krayevogo upravleniya professional'no-
tekhnicheskogo obrazovaniya (for Ryabov).
(Altai Territory---Farm mechanization---Study and teaching)

FATEYEV, P.; KUDASHKIN, P., prepodavatel'

We are improving the methods of laboratory work. Prof.-tekh. obr.
22 no.9:36-38 S '65. (MIRA 18:9)

1. Zamestitel' nachal'nika Altayskogo krayevogo upravleniya
professional'no-tekhnicheskogo obrazovaniya (for Fateyev).
2. Tal'menskoye sel'skoye professional'no-tekhnicheskoye
uchilishche (for Kudashkin).

FATEYEV, P.G., inzh.; ADAYEV, V.P., inzh.

Building a fully prefabricated factory building with a flat reservoir
roof. Prom. stroi. 41 no.8:10-15 Ag '64. (MIRA 17:11)

BUZINIYER, M.I.; VOROPAY, A.P.; DRUGOV, I.P.; YEVDOKIMOV, I.I.; KANTOR,
V.V.; KOMARNITSKIY, Yu.A.; MAKSIMENKO, I.I.; PAVLOVSKIY, V.V.;
CHEREDNICHENKO, Yo.T.; FATEYEV, P.Yo... red.; VERINA, G.P.,
tekhn.red.

[Socialist competition in railroad transportation; collected
articles] Sotsialisticheskoe sorevnovanie na zheleznodorozh-
nom transporte; sbornik statei. Moskva, Gos.transp.zhel-dor.
izd-vo, 1959. 222 p. (MIRA 12:12)
(Railroads)

VOROPAY, A.P.; ASHIN, G.K.; GONCHARUK, S.I.; MAKSIMENKO, I.I.;
SUSLIAYEVA, Ye.L.; SHEMANIN, G.M.; SHEMENEV, G.I., kand.
filos.nauk, red.; FATEYEV, P.Ya., retsenzent; VOLKOV,
P.S., retsenzent; PESKOVA, L.N., red.; BOBROVA, Ye.N.,
tekhn. red.

[Communist labor of railroad workers] Kommunisticheskii trud
zheleznodorozhnikov. Moskva, Transzheldorizdat, 1962. 72 p.
(MIRA 15:7)

(Railroads--Employees) (Socialist competition)

VOROPAY, A.P.; VYZHEKHOVSKAYA, M.F.; DRUGOV, I.P.; KOMARNITSKIY, Yu.A.;
MAKSIMENKO, I.I.; PAVLOVSKIY, V.V.; STEPANOV, D.A.;
CHEREDNICHENKO, Ye.T.; GANKIN, M.B., retsenzent; FATEYEV
P.Ya., retsenzent; PESKOV, L.N., red.; DROZDOVA, N.D., tekhn.red.

[Competition for communist labor in railroad transportation]
Sorevnovanie za kommunisticheskiy trud na zheleznodorozhnom
transporte. Moskva, Transzheldorizdat, 1963. 158 p.

(MIRA 16:9)

(Socialist competition) (Railroads--Employees)

FATEYEV, S. (g.Minsk)

Productivity of various methods of milking cows by machine. Sots.
trudy 5 no.6:137-138 Je '60. (MIRA 13:11)
(Milking--Labor productivity)

85738

28.1000

1089
1070
1031

S/115/60/000/011/002/013
B019/B058

AUTHOR: Fateyev, S. G.

TITLE: Active Conicity Control ^{it} for Machining on Circular Grinders

PERIODICAL: Izmeritel'naya tekhnika, 1960, No. 11, pp. 13 - 14

TEXT: A scheme is proposed for a device which enables compensation of deviations from the cylindrical form (conicity) occurring during cylindrical grinding. The device consists of an electric block with inductive pickup, the final control organ performing the automatic compensation for conicity, a further final control organ for controlling the machining and a distributor system. The inductive pickup is connected to a bridge. The voltage at the bridge output and the amplified voltage at the phase-detector output thus depends on the deviations of the work-piece measurements from the required dimension. A servomechanism controlled by an electronic relay corrects the position of spindle and grinding wheel. There are 1 figure and 1 Soviet reference. X

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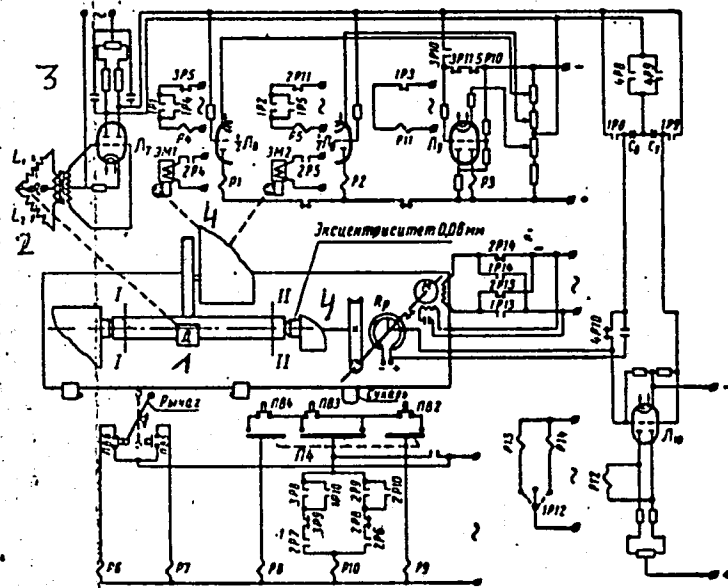
85738

S/115/60/000/011/002/013
B019/B058

Legend to Fig.1:

- 1) Inductive pickup,
- 2) bridge,
- 3) phase detector,
- 4) servomechanism.

X



Card 2/2

FATEYEV, S.G., inzh.

Thermal deformations of circular grinding machines and an
automatic compensation of conicity. Vzaim.i tekhn. izm.v
mashinostr.; mezhvuz.sbor. no.3:354-371 '61. (MIRA 14:8)
(Grinding machines)
(Thermal stresses)

FATEYEV, S.O.

Errors in measuring dimensions with automatic devices. Izv. tekhn. no. 8:
24-25 Ag '64. (MIRA 17:12)

FATYEV, S.G.

Errors of devices for active dimension control. Izv. tekhn.
no.11:4-6 N '65. (MIRA 18:12)

KHORIN, Vladimir Nikitovich, doktor tekhn. nauk; FATEYEV, Sergey.
Nikolayevich, inzh.; CHEPNYGHEV, Andrey Ivanovich, inzh.

[High-torque hydraulic motors in mining machinery construction] Vysokomomentnye gidroprivody v gornom mashinostroenii. Moskva, Nedra, 1964. 116 p. (MIRA 17:8)

ACCESSION NR: AP4024552

S/0197/64/000/001/0059/0062

AUTHORS: Artyukh, M.; Fateyev, V.; Zhiv, V.; Shirin, Yu.

TITLE: The effect of monoamineoxidase inhibitors on the convulsive performance of bemegride

SOURCE: AN LatSSR. Izvestiya, no. 1, 1964, 59-62

TOPIC TAGS: analeptic drugs, bemegride, convulsion, monoamine oxidase, monoamine oxidase inhibitor, hydrazide, benzylhydrazide of lactic acid, yprazide, transamine, adrenergic processes, reserpine, pyrogallol, aminazine

ABSTRACT: The present investigation was undertaken to study the relationship between the role of the analeptic drug bemegride in causing convulsions, and the effect of certain monoamineoxidase inhibitors, such as benzylhydrazide of lactic acid, isopropylhydrazide, yprazide, transamine, imypramine, reserpine, and pyrogallol. The tests were conducted using the technique x^2 , as described by M. L. Belen'kiy (Elementy* kolichestvennoy otsenki farmakologicheskogo effekta. Riga, 1959), with the participation of the staff of the department of pharmacology of the Riga Medical Institute. In the first series of experiments, conducted on 600 white mice, isopropylhydrazide, benzylhydrazide yprazide, and transamine were injected

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ACCESSION NR: AP4024552

intraperitoneally in respective doses of 100, 25, 100, and 10 mg/kg, following which 20 mg/kg of bemegride were introduced intraperitoneally after 3, 12, 24, or 48 hours. It was observed, that in the 3-hour interval injection all inhibitors facilitated the onset of clonic convulsions. In the 24-hour interval injection only the benzylhydrazide of lactic acid exhibited an enhancing effect on the onset of convulsions, with 16 mice out of 20 being afflicted, as against 8 for the controls. In the second series of experiments, the bemegride was introduced intraperitoneally to mice within one hour following the intraperitoneal administration of 50 mg/kg imipramine or 10 mg/kg aminazine, or within 2 hours after the administration of 50 mg/kg of either ypramine or pyrogallol, or following 3 hours after the administration of either 2.5 mg/kg reserpine or of 200 mg/kg pyrogallol. It was found that reserpine, as well as pyrogallol, facilitated the onset of clonic convulsions by bemegride. In the third series of experiments, 30 mg/kg Bemegride were introduced intraperitoneally to mice after a 3-hour interval following the administration in the same manner of benzylhydrazide of lactic acid, of yprazide, or of transamine. While transamine proved practically ineffective, the administration of benzylhydrazide of lactic acid and of yprazide resulted in a marked increase in the number of mice afflicted with tonic convulsions, with most cases being fatal. It is concluded that the facilitating effect on the onset of tonic convulsions

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seems to be restricted to the monoamineoxidase inhibitors which contain the hydrazine group. Orig. arc. has: 2 tables.

ASSOCIATION: Institut organicheskogo sinteza AN Latv. SSR (Institute of Organic Synthesis AN Latvian SSR)

SUBMITTED: 05Jul63

DATE ACQ: 23Mar64

ENCL: 00

SUB CODE: MA

NO REF SOV: 001

OTHER: 007

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PA 233T62

FATEYEV, V. A.

USSR/Metallurgy - Steel, Castings,
Properties

Jul 52

"Density and Mechanical Properties of Steel Cast-
ings Depending on the Type of Risers," V. A.
Fateyev, P.I. Kozheurov, Engr

"Litey Proizvod" No 7, p 26

Briefly discusses feeding of castings with break-
off risers and concludes that despite decrease
in specific wt of castings made with application
of these risers, av values of mech properties are
not affected significantly by the type of risers.
Experimentally investigates distribution of por-
osity in castings with breakoff and cutoff risers.

233T62

EATYEV, V. A.

Contribution to the Criticism of Methods of Calculating
Shrinkage Heads for Birefringent

Methods for calculating shrinkage heads recently
proposed by three authors are critically discussed and the
need for a sufficient experimental basis for such calculations
is indicated.—S. K.

2520
RL

FATEYEV, V.A., kand. tekhn. nauk, dotsent; IPATOV, N.E., kandi. tekhn. nauk,
dotsent.

Analytic determination of the efficiency of risers. Izv. vys.
ucheb. zav.; mashinostr. no.11:184-191 '63.

(MIRA 17:10)

1. Chelyabinskii politekhnicheskii institut.

IPATOV, N.K., kandidat tekhnicheskikh nauk; FATEYEV, V.A., kandidat tekhnicheskikh nauk.

Computational determination of deadheads. Lit.proizv.no.7:20-25 J1 '56.
(Founding) (MLRA 9:9)

FATEYEV, V.A.; IPATOV, N.K.

Comparing various methods of calculating risers. Lit.proizv.
no.3:32-35 Mr '62. (MIRA 15:3)
(Risers (Founding))

FATEYEV, V.A.; SMOLIN, N.A.

Signalling and control of the operation of the PP-350-IZ unit
for the formation of capron filament. Khim.volok. no.3:64-67
'62. (MIRA 16:2)

1. Spetsial'noye konstruktorskoye tekhnologicheskoye byuro
mashin dlya proizvodstva khimicheskikh volokon (SKTB MRhV).
(Nylon) (Automatic control)

IPATOV, N. K., kand. tekhn. nauk, dotsent; FATEYEV, V. A., kand.
tekhn. nauk, dotsent

Efficiency of risers. Izv. vys. ucheb. zav.; mashinostr.
no.7:112-122 '62. (MIRA 16:1)

1. Chelyabinskiy politekhnicheskii institut.

(Molding(Founding))

FATEYEV, V.A.; SMOLIN, N.A.

Automatic voltage regulation of a synchronous generator
in a frequency controlled drive system. Khim. volok. no.4:
58-59 '63. (MIRA 16:8)

1. Spetsial'noye konstruktorsko-tekhnologicheskoye byuro
mashin khimicheskikh volokon

FATEYEV, V.A., inzh.; SMOLIN, N.A., inzh.

Automatic regulation of the voltage of a synchronous generator in
a frequency regulated electric drive system. Vest. elektroprom. 34
no.8:14-16 Ag '63. (MIRA 16:9)
(Electric driving) (Electric generators)

SHESTAKOV, V.M.; FATEYEV, V.A.; SERIKOV, V.K.

Attachment to a loop oscillograph for measuring small shifts.
Zav. lab. 31 no.8:1021-1022 '65. (MIRA 18:9)

1. Institut mashinovedeniya i avtomatizatsii.

L 3782-66 EWT(m)/EPF(c)/EWP(j)/T/EWP(t)/EWP(b) IJP(c) JD/WM/WB/RM

ACCESSION NR: AP5014137

UR/0365/65/001/003/0330/0334

621.794.4

620.197.3

AUTHOR: Kiyuchnikov, N. G.; Kipriyanov, N. A.; Laykhter, L. B.; Fateyev, V. D.;

Shadrina, N. I.

TITLE: Investigation of the effect which various inhibitors have on the dissolution of iron oxides

SOURCE: Zashchita metallov, v. 1, no. 3, 1965, 330-334

TOPIC TAGS: corrosion, corrosion rate, corrosion inhibitor, iron oxide

ABSTRACT: The authors study the dissolution of iron oxides in mineral acids as well as in solutions of substances which form complex compounds with iron (citric acid and ammonium citrate) for eliminating slag in boilers at thermal electric power stations. Samples of ferrous oxides and mixed iron oxides were prepared by sintering powdered oxides in an argon atmosphere at 1200-1300°C. Ferric oxide specimens were sintered in air at 1300°. The specimens were cylindrical with a surface area of 77 cm². The inhibitors used were: BA-6 (a product of condensation of benzylamine and urotropin); PB-5 (a product of condensation of urotropin and ani-

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L 3782-66

ACCESSION NR: AP5014137

line); I-1-A, which is a byproduct of the manufacture of 2-methyl-5-ethyl pyridine; "ChM" put out by Soviet Industry according to Technical Specifications MNP-521-54; a mixture of potassium iodide and urotropin; Katapin-A (paradodecylbenzylpyridinium chloride); and Katapin-K. Graphs and tables of the results are given. In most cases, the inhibitors retard the action of hydrochloric acid on both ferrous and ferric oxides. The rate of dissolution of FeO is increased only by I-1-A in 3N HCl and BA-6 in 7N HCl. In 1N and 2N mixtures of hydrochloric and sulfuric acids, the rate of dissolution of FeO is reduced or somewhat increased by the presence of inhibitors. In a 5N mixture of these acids with a high content of hydrochloric acid, the stimulating effect of the inhibitors reaches a maximum, and diminishes in 7N acids. Dissolution of Fe₂O₃ is retarded by inhibitors in all concentrations of sulfuric-hydrochloric acid mixtures studied. Certain concentrations of BA-6 inhibitor in hydrochloric acid and in a hydrochloric-sulfuric mixture accelerate the dissolution of FeO, and have the least effect on retardation of Fe₂O₃ dissolution in comparison with the other inhibitors. At the same time, BA-6 is the most effective agent for retardation of steel dissolution in these media. FeO and Fe₃O₄ dissolve faster in a solution of ammonium monocitrate than in solutions of citric acid. The most effective inhibitor for steel dissolution in citric acid and in ammonium citrate solutions is an additive of 0.1% Katapin and 0.017% Captax. This

Card 2/3

L 3782-66

ACCESSION NR: AP5014137

mixture is also quite effective in retarding the dissolution of FeO. Orig. art. has: 4 figures, 3 tables. 3

ASSOCIATION: Moskovskiy gosudarstvennyy pedagogicheskiy institut im. V. I. Lenina (Moscow State Pedagogical Institute)

SUBMITTED: 25Dec64

44/5 ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

PC
Card 3/3

L 39090-66 EWT(m)/T/EWP(t)/ETI IJP(c) DS/JD/JG

ACC NR: AP6022878

SOURCE CODE: UR/0186/66/008/002/0197/0206

AUTHOR: Ziv, D. M.; Sukhodolov, G. M.; Fateyev, V. F.; Lastochkin, L. I.

39
B

ORG: none

TITLE: Study of the electrochemical behavior of elements present in low and ultralow concentrations in solution. Part 1. Dependence of the deposition potential of lead on platinum and gold electrodes on the Pb^{2+} concentration in solution

SOURCE: Radiokhimiya, v. 8, no. 2, 1966, 197-206

TOPIC TAGS: electrodeposition, lead, platinum, gold, electrode potential

ABSTRACT: A review of the literature shows that the nature of the electrode material on which the electrodeposition of an element from ultradilute solutions takes place plays a major part in the electrodeposition process. In this connection, the effect of the electrode material on the electrodeposition of lead on gold and platinum electrodes in nitric acid solutions was studied by means of polarization curves of the second kind. ^{212}Pb was used as the radioactive tracer for lead. The dependence of the critical deposition potential of lead, ϕ_{cr} , on its content in the solution was studied over a wide range of lead concentrations (10^{-12} to 10^{-2} g-ion/l). The curve expressing this dependence was found to have three regions: 1) region of constant ϕ_{cr} , (2) intermediate region, and (3) region of linear dependence of ϕ_{cr} on $\log C$.

Card 1/2

UDC: 547.53:546.815

L39090-66

ACC NR: AP6022878

0
i. e., the Nernst region. It was found that on platinum electrodes, ϕ_{cr} in the region of independent potentials is 0.110 V higher than on gold. The width of the intermediate region on platinum is two orders of magnitude smaller than on gold. In the Nernst region, the values of n (from the Nernst equation) were found to be 1.46 and 1.45 for platinum and gold electrodes respectively. Orig. art. has: 5 figures, 3 tables, and 3 formulas.

SUB CODE: 07/ SUBM DATE: 26Dec64/ ORIG REF: 006/ OTH REF: 009

L 39088-66 EWP(e)/EWT(m)/T/EXP(t)/ETI IJP(c) WH/DS/JD/EN
 ACC NR: AP6022879 SOURCE CODE: UR/0186/66/008/002/0206/0210
 AUTHOR: Ziv, D. M.; Sukhodolov, G. M.; Fateyev, V. F.; Lastochkin, L. I.
 ORG: none
 TITLE: Study of the electrochemical behavior of elements present in low and ultralow concentrations in solution. Part 2. Deposition of lead on graphite electrodes /5
 SOURCE: Radiokhimiya, v. 8, no. 2, 1966, 206-210
 TOPIC TAGS: lead, graphite, electrode potential, electrodeposition
 ABSTRACT: The paper continues a study of the dependence of the deposition potential of lead on its concentration in solution. The effect of the nature and concentration of the electrolyte on the value of the critical deposition potential ϕ_{cr} of lead on graphite electrodes was investigated by means of the method of polarization curves of the second kind. A study of the effect of solution acidity (0.1 and 3 N HNO₃) on ϕ_{cr} in the 10⁻¹³-10⁻¹ g-ion/l range of lead concentrations showed that the HNO₃ concentration has a substantial influence on the course of the dependence of ϕ_{cr} on log C_{Pb2+} in the range of ultralow lead concentrations (from 10⁻¹³ to 10⁻⁷ g-ion/l. This influence is insignificant at lead concentrations above 10⁻⁶ g-ion/l. A study of the dependence of ϕ_{cr} on log C_{Pb} in 1 N perchloric and nitric acid solutions showed that the nature of these acids has no appreciable influence on this dependence. Values of
 Card 1/2 UDC: 543.53:546.815

L 39088-66

ACC NR: AP6022879

the critical electrodeposition potentials of lead on graphite electrodes, obtained by methods of polarized curves of the first and second kind, were compared and found to agree satisfactorily. Orig. art. has: 4 figures and 5 tables.

SUB CODE: 07/ SUBM DATE: 26Dec64/ ORIG REF: 006

Card

2/2 MICP

AL'TSHULER, V.Ye., prof.; FATEYEV, V.N.

Important possibility for the improvement of breeding work with
dairy cattle. Agrobiologiya no.1:110-116 Ja-F '65. (MIRA 18:4)

1. Ivanovskiy sel'skokhozyaystvennyy institut.

BORISOV, B.G., kand.tekhn.nauk; POTOSKUYEV, M.N., kand.tekhn.nauk; ROMANOVA, T.M., kand.tekhn.nauk; TROSHIN, P.V., kand.tekhn.nauk. TSELEBROVSKIY, V.Ye., kand.tekhn.nauk; DANICHEK, Ye.A., kand.tekhn.nauk; KARYAGIN, N.P., kand.tekhn. nauk; FATEYEV, V.P. (Ioshkar-Ola)

Training of engineers for work in industrial heat and electric power systems. Prom.energ. 18 no.8:35-41 Ag '63. (MIRA 16:9)

1. Ivanovskiy energeticheskiy institut imeni V.I.Lenina. (for Borisov, Potoskuyev, Romanova, Troshin). 2. Tomskiy politekhnicheskiy institut (for TSelebrovskiy). 3. Dnepropetrovskiy metallurgicheskiy institut (for Danichek). 4. Gor'kovskiy inzhenerno-stroitel'nyy institut (for Karyagin).

(Power engineering—Education and training)

FATEEV, E. M.

Vetrodvigateli. Izd. 2. dopoin. i perer. pod red. V. S. Shamanina.
Moskva, Gosenergoizdat, 1946. 242 p. diagrs.

Windmills.

DLC: TJ825.F375 1946

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library
of Congress, 1953.

FATEYEN, Ye. M. Dr. Tech. Sci.

Dissertation: "Wind Motors and Wind Power Installations Theory, Design, Construction and Operation of Wind Motors." All-Union Inst. of Mechanization and Electrification of Agriculture - VIME 11 Nov 47.

SO: Vechernyaya Moskva, Nov, 1947 (Project #17836)

FATEEV, E. M.

Vetrodvigateli i vetroustanovki. Dop. v kachestve uchebn. posobiia dlia institutov i fakul'tetov mekhanizatsii sel'skogo khoziaistva. Moskva, Sel'khozgiz, 1948. 543 p. illus. (Uchebniki i uchebnye posobiia dlia vysshikh sel'skokhoziaistvennykh uchebnykh zavedenii)

Bibliography: p. 539-(541)

Windmills and wind turbines.

DLC: TJ825.F38

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

FATNEV, E. M.

/Vetrodvigatel' D-18. (Vestn. Mash., 1948, no.12, p. 17-18)

The D-18 windmill.

DLC: TN4.V4

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

38164. FATEYEV, YE. M.

Osnovy agregatirovaniya vetrodvigateley s rabochimi mashinami. Trudy
Vsesoyuz. Nauch.-issled. in-ta mekhanizatsii sel. khoz-va, t. XII,
1949, s. 245-87

KARMISHIN, A.V.; FATEYEV, Ye.M., professor, nauchnyy redaktor; MELEN-
TSEV, V.A., redaktor; ARHLAMOV, S.N., tekhnicheskiiy redaktor.

[Making use of the wind] Veter i ego ispol'zovanie. Pod nauchnoi
red. E.M.Fateeva, Moskva, Gos. izd-vo tekhniko-teoret. lit-ry.
1951. 62 p. (Nauchno-populiarnaya biblioteka, no.29) [Microfilm]
(Wind power) (MLRA 7:11)

FATEYEV, Ye M.

Vetrodvigateli i ikh primeneniye v sel'skom khozyaystve (Windmills and their use in agriculture) Moskva, Mashgiz, 1952.

271 p. tables, diags.

"Literature": 269-(270)

N/5
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FATEYEV, Ye. M.

1458. ACHIEVEMENTS OF SOVIET WIND POWER TECHNIQUE. Fateev, E.M. and Rozdestvenski I.V. (Vestn. Mash. (Mach. Ind. Bull., Moscow), Sept. 1952, 24-27; transl. in Energietechnik, Feb. 1953, vol. 3, 53-56). Two recently developed types of windmill are illustrated and described, the WNI-GUSIP D-18 and the ZAGI 1-D-18 of which the latter contains a short term energy storing device in the form of a flywheel. The use of these windmills in isolated regions and in conjunction with other forms of power generator, and the possibility of pumped storage, are discussed. (L).

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Isol'zovaniye Energii Vetra V Sel'skom Khozyaystve (Utilization of Wind Power in Agriculture, By) ALEKSANDR VASIL'YEVICH VINTAR I Ye. M. Fateyev. Moskva, Akademii Nauk SSSR, 1955. 108 P. Illus., Diagr., Graphs, Tables (Nauchno-Populyarnaya Seriya V Pomoshch' Sel'skom Khozyaystvu)

At Head of Title-Page: Akademiya Nauk SSSR. Energeticheskiy Institut.

FATEYEV, YEFIM MIKHAYLOVICH

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1957

FATEYEV, YEFIM MIKHAYLOVICH

VETRODVIIGATELI I VETROUSTANOVKI
(WIND-DRIVEN GENERATORS AND WIND INSTALLATIONS)
2., PERER. IZD. MOSKVA, SEL'KHOZGIZ, 1956.
535 P. ILLUS., DIAGRS., GRAPHS,
TABLES. (UCHEBNIKI I UCHEBNYYE POSO-
BIYA DLYA VYSSHIKH SEL'SKOKHOZYAYSTVEN-
NYKH UCHEBNIKH ZAVEDENIY)
"LITERATURA": P. 531-533.

PHASE I BOOK EXPLOITATION

738

Fateyev, Yefim Mikhaylovich

Metodika opredeleniya parametrov vetroenergeticheskikh raschetov vetroilovykh ustanovok (Methods of Determining Parameters of Wind Energy Calculations of Wind-Power Installations) Moscow, Izd-vo AN SSSR, 1957. 87 p. 3,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Energeticheskiy institut imeni G.M. Krzhizhanovskogo.

Resp. Ed.: Vinter, A. V., Academician; Ed. of Publishing House: Shapovalov, I.K.

PURPOSE: This book is intended for the use of engineers and technicians interested in wind-power installations.

COVERAGE: Problems of wind-power engineering are discussed. Methodical directions for processing wind data are given and methods are described for setting up wind-velocity distribution curves and curves for determining the utilization factor and other characteristics of wind-power installations. Examples of the application of wind-energy parameters in designing wind-power installations are given. The author mentions reports of other investigators:

Card 1/3

Methods of Determining Parameters of Wind Energy (Cont.) 738

Professor Sreznevskiy (1889), M. M. Pomortsev (1894), G. A. Grinevich (1952), and V. T. Poltoratskiy (1954). He calls the present book a first attempt at a methodical manual and emphasizes the necessity of further work in the field. The book contains 23 figures and 30 tables. There are 2 appendices containing 11 tables.

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= 8.1 m/sec	
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FATEYEV, Yefim Mikhaylovich, doktor tekhnicheskikh nauk, professor; ZHELI-
GOVSKIY, A.V., kandidat tekhnicheskikh nauk, dotsent, redaktor;
FEDOTOV, V.Ye., kandidat tekhnicheskikh nauk, retsenzent; MOISEL',
B.I., tekhnicheskii redaktor; SHIKIN, S.T., tekhnicheskii redaktor.

[Wind motors and their use in agriculture] Vetrodvigateli i ikh
primeneniye v sel'skom khoziaistve. Izd.2-oe, dop. i perer. Moskva,
Gos.nauchno-tekhn.isd-vo mashinostroit.lit-ry, 1957. 322 p.
(MLBA 10:6)

1. Chlen-korrespondent Akademii sel'skokhozyaystvennykh nauk imeni
V.I.Lenina(for Fateyev)

(Wind-mills)

FATEYEV, Yefim Mikhaylovich, doktor tekhn. nauk, prof.; LETNEV, B.Ya.,
Red.; BALLOD, A.I., tekhn. red.

[Windmills and wind-driven installations] Vetrodvigateli i
vetroustanovki. 2., perer. izd. Moskva, Sel'khozgiz, 1957.
535 p. (MIRA 16:9)

(Windmills)

BREMER, G.I., doktor tekhn.nauk, prof.; GALDIN, M.V., inzh.; DEMIN, A.V.,
kand.tekhn.nauk; ZYABLOV, V.A., kand.tekhn.nauk; KAPLUNOV, M.M.,
inzh.; KASHEKOV, L.Ya., inzh.; KOROLEV, V.F., kand.tekhn.nauk;
KRASNOV, V.S.; KULIK, M.Ye., kand.tekhn.nauk; MAKAROV, A.P., inzh.;
NOVIKOV, G.I., kand.tekhn.nauk; NOSKOV, B.G., inzh.; OLENEV, V.A.,
kand.vet.nauk; OSTANKOV, V.P., inzh.; PERCHIKHIN, A.V., inzh.;
POKHVALENSKIY, V.P., kand.tekhn.nauk; SERAFIMOVICH, L.P., kand.
tekhn.nauk; SMIRNOV, V.I., kand.tekhn.nauk; URVACHEV, P.N., kand.
tekhn.nauk; FADEYEV, N.N., inzh.; FATEYEV, Ye.M.; KRYUKOV, V.L.,
red.; VESKOVA, Ye.I., tekhn.red.

[Reference book on the mechanization of stock farming] Spravochnaia
kniga po mekhanizatsii zhivotnovodstva. Moskva, Gos.izd-vo sel'khoz.
lit-ry, 1957. 678 p. (MIRA 10:12)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh
nauk im. V.I.Lenina (for Krasnov, Fateyev).
(Farm equipment) (Stock and stockbreeding)

FATEYEV, Ye.M.; ORLOVA, I.A., red.; GONCHAROV, N.G., tekhn.red.

[Wind-powered units; present status and prospects for development] Vetrozilovye ustanovki; sostoianie i puti razvitiia. Moskva, Vses.in-t nauchn. i tekhn.informatsii, 1959. 77 p. (MIRA 13:10)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Fateyev).
(Windmills)

8(5)

PHASE I BOOK EXPLOITATION

SOV/2570

Akademiya nauk SSSR. Energeticheskiy institut

Voprosy vetroenergetiki (Problems in Wind Power Engineering)
Moscow, Izd-vo AN SSSR, 1959. 135 p. Errata slip inserted.
1,700 copies printed.

Ed. of Publishing House: V. N. Golovko; Tech. Ed.: I. N. Guseva; Editorial Board: Ye. M. Fateyev, Corresponding Member, VASKhNIL, Professor (Resp. Ed.), D. N. Bystritskiy, K. P. Vashkevich, A. V. Karmishin, V. R. Sektarov, V. Ye. Fedotov, M. O. Frankfurt, G. I. Sholomovich.

PURPOSE: The book is intended for power engineers, scientists, and research workers engaged in wind power engineering.

COVERAGE: These articles discuss aspects of wind power utilization. Individual papers treat the aerodynamic properties of already existing windmills, the construction of new types of windmills, wind electric power stations, and efficient wind-electric and wind-pumping units. A theory on the control of high-speed windmills is also discussed. The TsNILV (Central Card 1/4.

Problems in (Cont.)

SOV/2570

Scientific Research Laboratory for the Study of Windmills) is reported to be working on the development of a 400 kw wind - electric station in parallel operation with several stations with common buses to supply electricity to rural areas. References accompany each article.

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AVAILABLE: Library of Congress

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PERCHIKHIN, Abram Vladimirovich, inzh.; KRASNOV, V.S.; KASHEKOV, L.Ya.,
inzh.; NOVIKOV, G.I., kand.tekhn.nauk; MAKAROV, A.P., inzh.;
GALDIN, M.V., inzh.; KOROLEV, V.F., kand.tekhn.nauk; FATEYEV,
Ye.M., doktor tekhn.nauk; FADNEYEV, N.N., inzh.; ROZIN, M.A.,
red.; GUREVICH, M.M., tekhn.red.

[Mechanisation of heavy work on livestock farms] Mekhanizatsia
trudozemnykh rabot na zhivotnovodcheskikh fermakh. Izd.4., ispr.
i dop. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1959. 447 p.
(MIRA 13:10)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystven-
nykh nauk imeni V.I.Lenina (for Krasnov).
(Stock and stockbreeding) (Farm mechanization)

३३४

SABININ, G.Kh. (Moskva), FATEYEV, Ye.M. (Moskva)

Existing conditions and prospects for the use of wind power in
the U.S.S.R. Izv. AN SSSR. Otd. tekhn. nauk. Energ. i avtom. no.6:
44-55 N-D '60. (MIRA 13:12)

(Wind power)

FATEYEV, Yefim Mikhaylovich, doktor tekhn. nauk, prof.; FAL'KO, O.S.,
inzh., red.; CHERNOVA, Z.I., tekhn. red.

[Windmills and their use in agriculture] Vetrodvigateli i ikh pri-
menenie v sel'skom khoziaistve. 1zd.3., dop. i perer. Moskva,
Mashgiz, 1962. 246 p. (MIRA 15:6)

1. Chlen-korrespondent Akademii sel'skokhozyaystvennykh nauk imeni
V.I.Lenina (for Fateyev). (Windmills)

FATEYEV, Ye.M., doktor tekhn. nauk, prof., otv. red.; ORPIK, S.L.,
red. izd-va; POLYAKOVA, T.V., tekhn. red.; NOVICHKOVA, N.D.,
tekhn. red.

[Methods for the development of a wind power cadastre] Metody
razrabotki vetroenergeticheskogo kadastra. Moskva, Izd-vo
Akad. nauk SSSR, 1963. 193 p. (MIRA 16:2)

1. Akademiya nauk SSSR. Energeticheskiy institut.
2. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyay-
stvennykh nauk imeni V.I. Lenina (for Fateyev).
(Wind power)

FATEYEVA, Ye.M.; TOTOCHENKO, V.K.; ROSHAL', N.I.; TROITSKAYA, N.A.

Differential diagnosis and treatment of some forms of rickets-like diseases in children. *Pediatrics* 42 no.9:69-74 S'63.

(MIRA 17:5)

1. Iz kliniki rannogo vozrasta (zaveduyushchiy - prof. I.V. Tsimblar)
biokhimicheskoy laboratorii (zaveduyushchiy - prof. A.A. Titayev)
Instituta pediatrii (direktor - dotsent M.Ya. Studenikin) AMN SSSR.

FOMIN, Ye.M.; FATEYEVA, A.A.

Use of additional light for producing seeds of *Primula obconica*
Hance. Biul.Glav.bot.sada no. 48:91-92 '63. (MIRA 17:5)

1. Glavnyy botanicheskiy sad AN SSSR.

ZHUKOVSKIY, B.D., kand. tekhn. nauk; ZIL'BERSHTEYN, L.I., kand. tekhn. nauk;
MIZERA, V.I., inzh.; PETRUNIN, Ye.P., inzh.; TAT'YUK, G.Z., inzh.;
Prinimali uchastiye: MATLAKHOV, L.I.; NECHIPORENKO, M.I.; DUPLIY,
G.D.; GAPICH, V.I.; FATEYEVA, A.F.; DYN'KO, N.M.; LUGOVENKO, I.P.;
DEM'YANOV, B.M.; POSTIL, I.S.; BEZRODNYKH, I.Ya.

Investigating the possibility of manufacturing welded tube
blanks for cold forming. Proizv. trub no.11:67-72 '63. (MIRA 17:11)

55
FATEYEVA, E. A.

PHASE I BOOK EXPLOITATION 80V/6012

Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.

Avtomaticheskoye regulirovaniye i upravleniye (Automatic Regulation and Control) Moscow, Izd-vo AN SSSR, 1962. 526 p. Errata slip inserted. 9000 copies printed.

Resp. Ed.: Ye. Z. Tsypkin, Professor, Doctor of Technical Sciences;
Ed. of Publishing House: Ye. M. Grigor'yev; Tech. Ed.: I. M. Dorokhina.

PURPOSE: This book is intended for scientific research workers and engineers concerned with automation.

COVERAGE: The book is a collection of articles consisting of papers delivered at the 7th Conference of Junior Scientists of the Institute of Automation and Telemekhanics, Academy of Sciences USSR, held in March 1960. A wide range of scientific and technical questions relating to automatic regulation and control is covered.

Card 1/12

Automatic Regulation (Cont.)

SOV/6012

The articles are organized in seven sections, including automatic control systems, automatic process control, computing and decision-making devices, automation components and devices, statistical methods in automation, theory of relay circuits and finite automatic systems, and automated electric drives. No personalities are mentioned. References are given at the end of each article.

TABLE OF CONTENTS:

PART I. AUTOMATIC CONTROL SYSTEMS

Andreychikov, B. I. The effect of dry friction and slippage [play] on error during reverse gear operation of serve-feed systems 3

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Automatic Regulation (Cont.)

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Card 5/12

BERLYAND, M.Ye.; GRACHEVA, V.P.; FATEYEVA, G.A.

Local prognosis of fog formation. Trudy GGO no.127:57-68 '62.
(MIRA 15:7)

(Weather forecasting) (Fog)

32-24-4-35/67

AUTHOR: Fateyeva, G.Ia.

TITLE:

~~A Spectral Method for the Determination of Nickel in Cobalt Alloys, and the Determination of Cobalt in Nickel Alloys~~
(Spektral'nyy metod opredeleniya nikelya v soyedineniyakh kobal'ta i kobal'ta v soyedineniyakh nikelya)

PERIODICAL:

Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 4, pp. 461-461 (USSR)

ABSTRACT:

A method of determining oxides and salts of nickel and cobalt was worked out. Briquettes accurately dimensioned and made from a mixture of the annealed powder to be investigated and from electrolyte copper powder (1 : 5) were produced. The samples were pressed in special molds under a pressure of 5800 kg/cm², so that it was possible to record the spectrum 12 times. The standard generator PS-39 with an electrolyte copper electrode was used as a light source. The electric arc current had 6 amperes, exposure lasted 30 seconds and burning 10 seconds. Dia-positive films with a high degree of contrast were used. Analysis was carried out by the method of three standard samples, which consisted of a synthetic mixture produced by the method

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A Spectral Method for the Determination of Nickel
in Cobalt Alloys, and the Determination of Cobalt in
Nickel Alloys

32-24-4-35/67

of a successive reduction of concentration. The concentration of admixtures was determined graphically. The accuracy of spectral analysis was fully confirmed by a comparison with results obtained by chemical analysis. The presence of from 0.001 to 1% iron is not noticeable. The duration of an analysis for one sample is given as being 3 hours and 20 minutes, and for 10 samples -- 10 hours.

1. Cobalt alloys--Spectra 2. Nickel--Determination 3. Metals
--Preparation 4. Spectrum analyzers--Performance

Card 2/2

Fateyeva
38279 FATEYEVA, L. I. AND YELIZAROVSKIY, S. I.

O krovosnabzhenii lokteвого nerva. Sbornik trudov (Arkhang. gos. med. in-t),
vyp. 9, 1949, s. 78-85. - Bibliogr: 9 nazv.

L 18112-63 EWT(1)/BDS/ES(w)-2 AFFTC/ASD/LJP(C)/SSD Pub-1
 3/0048/63/027/008/1078/1080
 ACCESSION NR: AP3004504

AUTHOR: Nikolayev, V.S.; Dmitriyev, I.S.; Teplova, Ya.A.; Fateyeva, L.N.

TITLE: Variation of the mean charge of fast ions as a function of the density of the medium Raport presented at the Second All-Union Conference on the Physics of Electronic and Atomic Collisions held in Uzhgorod 2-9 Oct 1962

SOURCE: AN SSSR, Izvestiya, ser.fiz., v.27, no.8, 1963, 1078-1080

TOPIC TAGS: ion charge, electron loss, electron capture, ionization loss, N

ABSTRACT: The mean charge of uranium fission fragments, established incident to their passage through a gas, is known to increase with increasing gas density. According to N.Bohr and J.Lindhard (Kgl.danske ved.selskab.Mat.fys.medd., 28, No.7, 1954), this is due to increase in the probability for loss of electrons from the excited states with decrease of the interval between successive ion-atom encounters. In the present work increase of the mean ion charge incident to increase in gas density was observed in experiments with 4.9 MeV ($v = 8.2 \times 10^8$ cm/sec) triply charged nitrogen ions. The cyclotron accelerated ions entered a 10 cm diameter 4.8 meter long collision chamber. The particles traversing the chamber were analyzed by a magnet and detected by proportional counters. The relative numbers ϕ_1

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L 18142-63

ACCESSION NR: AP3004504

of ions with different charges were determined at nitrogen pressures from 4×10^{-8} to 5×10^{-2} mm Hg. The results are shown in the figure (see Enclosure). At pressures under 10^{-3} mm Hg the experimental values of ϕ_1 and the mean charge \bar{I} virtually agree; above 10^{-3} mm Hg the charge distribution in the ion beam approaches an equilibrium value and the ϕ_1 curves level off. Above $>10^{-2}$ mm Hg the mean charge begins to decrease with rising pressure owing to decrease in the ion velocity as a result of collision slowing down. Thus, gas at 10^{-2} mm Hg and up cannot be regarded as sufficiently rarified where passage of light element ions is concerned. This fact and the pressure variation of ϕ_1 in the region of lower pressures should be taken into account in using experimental data on ϕ_1 for determining electron loss cross sections on the basis of electron capture cross sections (and vice versa).
Orig.art.has: 1 figure.

ASSOCIATION: none

SUBMITTED: OO

DATE ACQ: 26/Aug63

ENCL: 01

SUB CODE: PH

NO REF SOV: 008

OTHER: 004

Card 2/22

DMITRIYEV, I.S.; NIKOLAYEV, V.S.; FATEYEVA, L.N.; TEPLOVA, Ya.A.

Study of the loss of several electrons by fast multiply charged ions. Zhur. eksp. i teor. fiz. 43 no.2:361-369 Ag '62.

(MIRA 16:6)

1. Institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta.
(Ions) (Electrons)

FATEYEVA, L.N.

56-5-4/55

AUTHOR
TITLE
PERIODICAL
ABSTRACT

NIKOLAYEV, V. S., FATEYEVA, L.N., DMITRIYEV, I.S., TEPLOVA, Ya.A.
Distribution of the Equilibrium of the Charge of Nitrogen Ions
(Ravnovesnoye raspredeleniye zaryadov ionov azota. Russian)
Zhurn. Eksperim. i Teoret. Fiziki, 1957, Vol 32, No 5, pp 965-968 (U.S.S.R)
 $^{14}\text{N}^{+2}$, $^{14}\text{N}^{+3}$, and $^{14}\text{N}^{+4}$ -ions are accelerated up to 0,95 to 9,4 MeV in
a 72 cm cyclotron. The focussed beam penetrated a target at about 8 m
distance from the cyclotron and was then deflected in a horizontal di-
rection by a magnet. The targets consisted of a celluloid foil ($\sim 10\mu\text{g}/\text{cm}^2$)
on to which in the vacuum beryllium ($\sim 10\mu\text{g}/\text{cm}^2$), nickel ($\sim 10\mu\text{g}/\text{cm}^2$),
and gold ($15 - 30\mu\text{g}/\text{cm}^2$) was vaporized.
The recording device consisted of proportionality counter tubes arranged
one behind the other, which had an input surface of $110 \times 0,1 \text{ mm}^2$ and
were closed by cellophane ($\sim 70\mu\text{g}/\text{cm}^2$). In the first counter all ions
and in the second only ions with a certain charge were measured. The
dependence of the average charge on the velocity of ions is graphically
recorded.
A slight difference in the charge distribution of the ions after their
passage through the above mentioned materials was found.

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56-5-4/55

Distribution of the Equilibrium of the Charge of Nitrogen Ions

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Card 2/2

FATEYEVA, L.N.

AUTHOR:

TEPLOVA, Ya.A., DMITRIYEV, I.S., NIKOLAYEV, V.S.,
FATEYEVA, L.N.

56-5-6/55

TITLE:

On the Interaction of Lithium Ions with Matter. (*vzaimodeystvi*
ionov litiya s veshchestvom, Russian)
Zhurnal Eksperim. i Teoret. Fiziki, 1957, Vol 32, Nr 5,
pp 974 - 978 (U.S.S.R.)

PERIODICAL:

ABSTRACT:

In a 72 - cm cyclotron Li^7 ions were accelerated to 0.5 to 5 MeV and their specific ionization in air and hydrogen, the equilibrium distribution of charge after passage through celluloid and their ranges in hydrogen, air, and in the photoemulsion NIKFI-YA-2 were determined. From the curves of the energy loss of the Li^7 ions in air (expressed in MeV per 1 cm path) a maximum at about $7 \cdot 10^8$ cm/sec ion velocity can be observed, whereas for hydrogen a broad maximum between 4 and $8 \cdot 10^8$ cm/sec ion velocity is to be noticed.

As a result of the charge equilibrium distribution of the Li^7 ions, after they had entered into interaction with a celluloid foil of $\sim 20 \mu\text{g}/\text{cm}^2$ thickness, the corresponding curves for 4 different charge states are given

The range curves of the Li^7 ions in the emulsion NIKFI-YA-2 are compared with those of other photoemulsions.

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56-5-6/55

On the Interaction of Lithium Ions with Matter.

ASSOCIATION: Not given
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SUBMITTED:
AVAILABLE: Library of Congress

Card 2/2

FATEYEVA, L. N.

AUTHORS: Nikolayev, V. S., Dmitriyev, I. S.,
Fateyeva, L. N., Teplova, Ya. A.

56-6-3/47

TITLE: The Equilibrium Distribution of Charges in a Beam of
Ions of Light Elements (Ravnovesnoye raspredeleniye
zaryadov v puchke ionov legkikh elementov)

PERIODICAL: Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, 1957,
Vol. 33, Nr 6(12), pp. 1325-1334 (USSR)

ABSTRACT: The present paper determines the equilibrium distribution
of the charges of the ions of light elements with nuclear
charge numbers Z from 5 to 10 after their passage through
hydrogen, air, argon, and through a celloid film. These
ions had velocities of from $3,5$ to $11,10^8$ cm/sec, i.e.
 $v \sim 1,5 - 5 v_0$, where it holds that $v_0 = e^2/\hbar$.
As a source of the fast particles a 72 cm cyclotron was
used, by means of which the following ions were accelerated:
 $11_B^{+1,+2,+3}$; $13_C^{+2,+3}$; $14_N^{+2,+3}$; $16_O^{+2,+3}$
and $20_{Ne}^{+2,+3}$. The ion beam emerging from the cyclotron
was deflected by a magnetic field after which it entered a

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The Equilibrium Distribution of Charges in a Beam of
Ions of Light Elements

56-6-3/47

re-charge chamber. The particles which passed through the chamber were analyzed by means of a magnet and were recorded by means of counters. The results of these measurements are illustrated by means of three diagrams. The distribution of charges in an ion beam in general differs after the passage through the various substances. Attention is also caused by the different character of the dependence of the ratio of the relative intensities I_{i+1}/I_i upon the velocity

of the substance when passing through solid and gaseous matter. (Here i denotes matter) During the passage of ions through different media the following peculiarities may be observed in the behavior of the degree of ionization \bar{i}/Z .

At $0,2 \leq \bar{i} \leq 0,6$ the average charge in argon is in all investigated ions larger than the average charge in hydrogen (by about 10-20 %). The average charge in air depends less on velocity than the average charge in hydrogen and argon. The average charge of the ions is, after having passed through a celluloid film, greater within a wide range of velocity than the average charge of ions in gases. With increasing nuclear charge number of the ions the average

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The Equilibrium Distribution of Charges in a Beam of
Ions of Light Elements

56-6-3/47

charge of ions after passage through the film increases much more rapidly than the average charge in air. The degree of ionization of the ions investigated here in air, hydrogen, and argon in the domain $0,2 \lesssim i \lesssim 0,6$ can be represented for every gas by a special function of the parameter $v/v_0 Z^\alpha$ where $\alpha \sim 0,4$ holds in the case of all gases. In conclusion the authors discuss the here obtained results and compare them with those obtained by other authors. There are 7 figures, 2 tables, and 20 references, 7 of which are Slavic.

ASSOCIATION: Moscow State University (Moskovskiy gosudarstvennyy universitet)

SUBMITTED: June 28, 1957

AVAILABLE: Library of Congress

Card 3/3

FATEYEVA, L. N.

56-7-63/66

AUTHOR
TITLE

NIKOLAYEV, V.S., FATEYEVA, L.N., DMITRIYEV, I.S., TERLOVA, I.A.
The Re-Charge Cross Section of Nitrogen Ions in Gases
(Sobcheniya perezaryadki ionov azota v gazakh. Russian)
Zhurnal Eksperim. i Teoret. Fiziki 1957, Vol 33, Nr 7, pp 306 - 307
(U.S.S.R.)

PERIODICAL

ABSTRACT

N^{+2} , N^{+3} , N^{+4} - ions were accelerated to 1,3 - 9,7 MeV on a 72 cm cyclotron and the recharge cross section of these ions in nitrogen, argon, and hydrogen was measured. In form of curves the electron capture cross section and the electron loss cross section of N-ions in nitrogen is represented. The electron capture cross section for nitrogen and argon can be represented by

$$\sigma_{i,i-1} = 2\pi \cdot a_0^2 (v_0/v)^5 i^{5/2} Z^{1/2}$$

(i - charge, a_0 , v_0 - Bohr's radius and velocity of the electron in the hydrogen atom, Z - atomic number of the investigated gas).
The electron loss cross section $\sigma_{i,i+1}$ is 2 - 2,5 times greater in argon, and 6 - 10 times smaller in hydrogen than that of nitrogen. (With 1 illustration and 4 Slavic references).

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